

## **RISK-INFORMED DECISION MAKING (RIDM) RISK PILOT STUDIES**

### **RIDM Risk Pilot Proposals**

FERC D2SI is continuing to advance the process of integrating risk-informed decision making into our dam safety program. D2SI personnel have been developing interim RIDM Risk Guidelines, conducting risk training, and coordinating risk methodologies with other federal agencies over the last few years. An important next step in the integration process is the trialing of risk policies, processes, and methodologies and how these are used to inform the decision making process.

### **Purpose of Risk Pilot Studies**

The purposes of the risk pilot studies are to:

- a. Provide a clearer understanding of the outstanding dam safety issues at each dam and provide a more confident path to resolution of those issues through risk-informed decision making.
- b. Evaluate the RIDM policy and processes, including identifying potential shortcomings in the interim guidelines.
- c. Evaluate the risk methodologies, including looking for holes or gaps in methodology/guidance; identifying potential challenges or shortcomings in existing methodologies; and identifying potential tools that would be beneficial for future risk analyses.
- d. Identify future training needs for risk implementation.
- e. Obtain input from licensees and consultants on the overall processes and methodologies.

### **Types of Projects**

A variety of projects are being sought for the risk pilot studies to evaluate a wide range of technical, policy, and process issues. This includes a:

- Variety of technical/potential failure mode issues. Examples include internal erosion/piping; spillway gates; operational issues; liquefaction/deformation; overtopping, spillway erosion, etc.
- Range of loading conditions (variable annual reservoir water surface, seismic, flood)
- Range of consequences, including loss of human life and economic consequences
- Range of the number of technical issues from one issue to multiple issues from multiple loading conditions.

In addition to the above, projects are sought that would provide a range in the size of the licensees, from smaller licensees to larger licensees, and projects that range in geographic diversity.

Projects should be relatively simple (i.e., one powerhouse vs multiple powerhouses; one spillway vs. multiple spillways; one or two impounding dams rather than more than two dams, etc.) so as not to overly complicate the pilot studies.

Again, as mentioned above, the projects should have dam safety issues where risk may help in developing a clearer path to a resolution.

Extremely complex, controversial, political, or particularly unique projects or technical issues are not encouraged as part of the risk pilot testing.

Ideally we would be looking for 8 to 12 projects that could be initiated at various times throughout 2016 and could be completed by late 2017 or early 2018.

### **Personnel**

Licensees should attempt to use personnel familiar with general risk analysis methodologies as the risk pilot studies are not structured to be a training program.

### **Submittal of Proposals**

Proposals for the risk pilot studies should include the information included in Attachment A. Proposals should be submitted to the Washington, DC office of FERC D2SI, attention David Capka. Proposals should be submitted no later than October 31, 2016.

### **Additional Information**

For additional information please contact Bill Allerton, Dave Capka, or Doug Boyer.

## Attachment A

Project Name

Purpose/Objective of Risk Analysis

Outcome sought

Description of Project Features

Dam, spillway, gates, operational history

Summary of Previous PFMA's

Highlighted PFMA's

Proposed Risk Team Members (with resumes and highlighting risk knowledge/experience)

Facilitator

Subject matter experts

Risk software operator

Note taker/recorder

Proposed Risk Analysis Software

Engineering Analyses Needed to Support the Risk Analysis

List of existing engineering analyses

Loading

System Response

Consequences

Additional analyses needed to perform the risk analysis

Loading

System Response

Consequences

Proposed Schedule

Kickoff meeting

Completion of initial engineering analyses

Site visit, PFMA review meeting (and revision, if needed), and screening level risk analysis elicitation

Completion of follow up engineering analyses

Quantitative risk analysis elicitation

Draft report

Review meeting

Final report

Lessons learned briefing